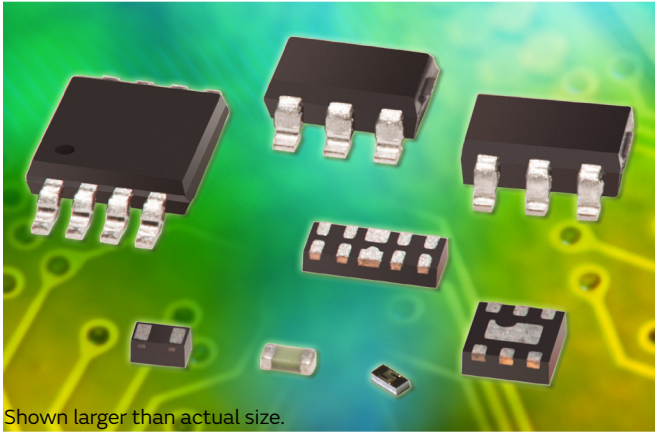


LXES Series

ESD Protection Devices

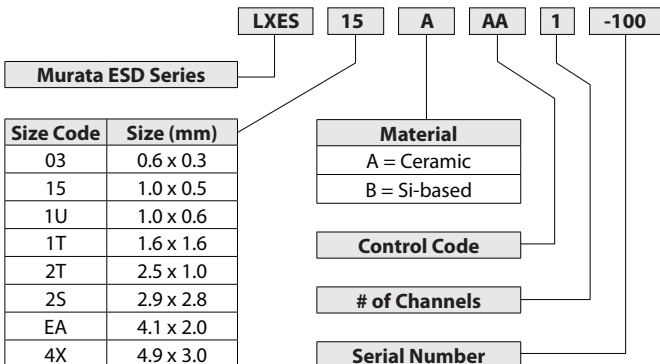


Shown larger than actual size.

Features

- Ideal for high-speed data lines
- Manufactured in compliance with IEC 61000-4-2 Level 4 (8kV contact and 15kV air discharge)
- Ultra-low Capacitance (0.05pF typical) in the ceramic version. The ceramic version is also Bi-directional, RoHS compliant, Halogen free, and Lead free.
- A capacitance as low as 0.25pF can be achieved with the silicon versions. These versions are available in single- or multi-channel configurations and offer very low-level triggering and clamping voltages.
- Fast response time (<1ns)

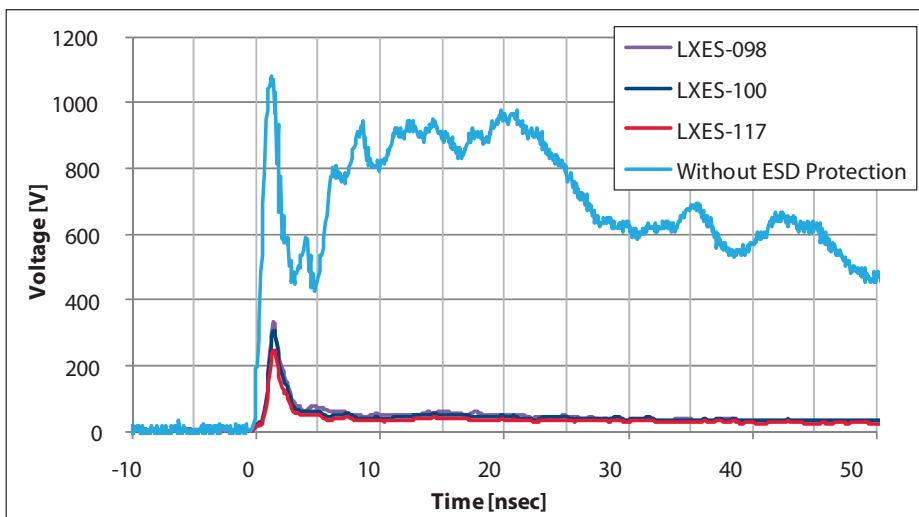
Part Numbering System



Applications

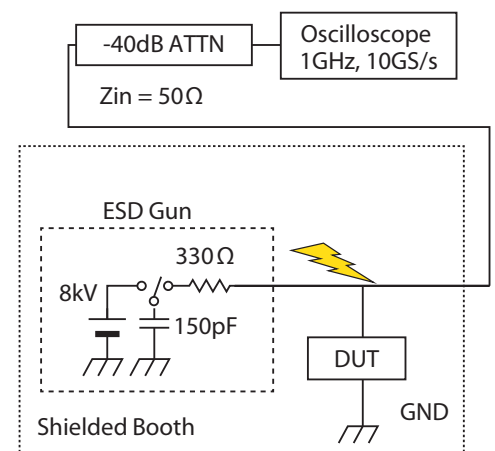
- HDMI 1.3, USB 2.0, USB 3.0, IEEE 1394b
- Cell Phones, Computers, and Peripherals
- A/V Equipment, STB, DVD, HDTV, etc.
- Antenna Ports

ESD Test Measurement System



Resultant waveforms show how the addition of ESD protection devices can help protect electronic equipment from electrostatic discharge.

Test Equipment Setup













Product Brief

LXES Series

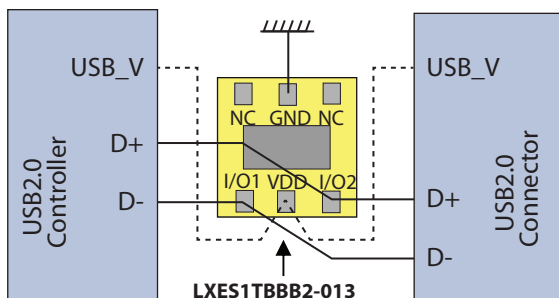
ESD Protection Devices

Product Lineup

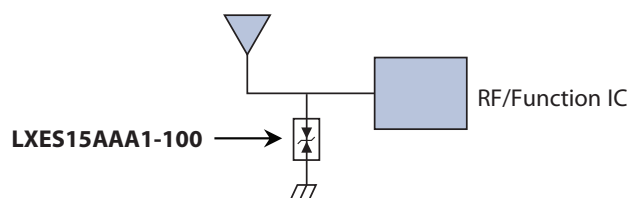
Type	# of Channels	Part number	Capacitance (pF - typical)	Breakdown Voltage (V)**		L x W (mm)	T (mm max)	Package (not to scale)
				Min.	Max.			
Ceramic		LXES15AAA1-117	0.05			1.0 x 0.5	0.33	0402 
		LXES03AAA1-098	0.05			0.6 x 0.3	0.33	0201 
Silicon	1	LXES1UBBB1-008	0.50	7	10	1.0 x 0.6	0.6	
		LXES1UBAB1-007		18		1.0 x 0.6	0.6	
		LXES1UBAA1-096	7.50	5.8		1.0 x 0.6	0.55	FBP1006P2
		LXES03BAA1-131	0.50	6		0.6 x 0.3	0.32	
		LXES03BAA1-110	5	5.6		0.6 x 0.3	0.32	
		LXES03TBB1-141	0.45	7		0.6 x 0.3	0.2	0201 
		2	LXES1TBCC2-004	0.55	6	9	1.6 x 1.6	0.55
	LXES1TBBB2-013		6		9			
	4	LXES2SBAA4-016	0.55	6	9	2.9 x 2.8	1.45	
		LXES2SBBB4-026	1.00	6	9			
		LXES2SBAA4-114	12	6	9			
		LXES2TBCC4-028	0.50	6	10			
	6	LXES4XBAA6-027	0.25	6	10	4.9 x 3.0	1.1	MSOP-8 
		LXESEABAA6-046	0.27	6		4.1 x 2.0	0.4	DFN4120-P10 
				**at 1mA				

Application Examples

USB2.0 Single Port Protection



Antenna Port Protection



Murata:

[LXES03AAA1-098](#) [LXESEABAA6-046](#) [LXES03BAA1-110](#) [LXES03BAA1-131](#)